

REMARKS

Applicant's attorney is appreciative of the telephone interview granted by the Examiner on June 19, 2008. At that interview, a proposed new set of claims was discussed, and Applicant's attorney pointed out the differences between the invention as claimed and the cited art.

Objection has been raised to the specification and the specification has now been amended to use proper subject matter headings.

Claims 1, 2, 4-9 and 18 have been rejected under 35 USC 112, second paragraph, for improper use of the term "means."

The claims of record have now been canceled and replaced by a new set of Claims 38-74 which have been written in proper form for U.S. practice. As the new claims utilize proper "means plus function" terminology, withdrawal of this rejection is requested.

Claim 19 has been rejected under 35 USC 112, second paragraph, as being indefinite for the term "produces a loose assembly." Applicant disagrees with the allegation that the term "loose assembly" is indefinite. For a person of ordinary skill in the art of electrical-mechanical connections, the usual practice is to tighten the connections for mechanically joining the connection members in order to obtain a low and stable initial contact resistance. However, as discussed in the specification at page 12, lines 23-27 and page 17, lines 22-25, this is not necessarily a good practice when dealing with inert anodes because it may induce mechanical stresses which can be detrimental to the anode. Hence, according to this embodiment of the invention, the mechanical connections are made loose at the beginning, but are made tight during the brazing operation which completes the connection. "This variant avoids mechanical stresses" (page 17, line 25).

Withdrawal of this rejection is requested.

Claims 1, 2, 4-16, 18, 19, 20, 26, 29, 30, 32, 33, 36 and 37 have been rejected under 35 USC 102(b), as anticipated by D'Astolfo, Jr. et al, while Claims 3 and 17 have been rejected under 35 USC 103(a) as obvious over D'Astolfo, Jr. et al.

New Claim 38 is directed to an anode assembly for use in a fused bath electrolysis aluminum production cell comprising an inert anode in the shape of a ladle and having an open end, a connection conductor having a connection end, and at least one brazed metallic joint or at least one brazing material that can form a brazed metallic joint by brazing wholly or partly during use. The joint or the material is disposed between at least part of a connection surface at the open end of the anode, and at least part of a connection surface at the connection end of the conductor.

D'Astolfo, Jr. et al discloses, as shown in Figure 3, the connection of an inert anode 14 to a connection conductor 16. As disclosed at the top of column 3, "connector 16 may be attached to the inert anodes 14 by any suitable means, such as brazing, sintering and mechanical fastening." The particular example as set forth in D'Astolfo Jr. et al involves filling the bottom of the inert anode with a mixture of copper powder and small copper beads, following by sintering to attach the connection conductor to the inside of the anode.

Brazing, as is presently claimed, is well known to be a joining process where a filler metal or alloy is heated to melting temperature and distributed between two or more close fitting parts by capillary action. Since capillary action is involved, the parts must be placed very close to each other, as is shown in Figure 1 of the present application where the brazed metallic joint is designated 31. Comparing this embodiment to the embodiment to the embodiment shown in Figure 3 of D'Astolfo Jr. et al, the only connection surfaces of D'Astolfo Jr. et al which could possibly be brazed are the

surfaces at the very bottom of connection rod 16, and the upstanding center at the bottom of the anode cup. The remainder of the materials within the cup are deemed to be protective materials, as described at column 2, lines 61-65. These materials are not described with any specificity. However, since the anodes are stated to have diameters of from about 5 to 30 inches, (column 2, line 45), it is very clear that the distance between the anode wall at the opening and the connection rod is much too great to attach the rod to the wall by brazing.

Thus, while D'Astolfo Jr. et al may suggest brazing a connection conductor to an inert anode, there is no disclosure or suggestion that the brazing material should be disposed between a connection surface at the open end of the anode and a connection surface at the connection end of the conductor.

Withdrawal of these rejections is accordingly requested.

The allowability of Claims 21-25, 27, 28, 31 and 34 has been noted.

In view of the foregoing amendments and remarks, Applicant submits that the present application is now in condition for allowance. An early allowance of the application with amended claims is earnestly solicited.

Respectfully submitted,



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